
INDIANA **Epidemiology** *NEWSLETTER*



Epidemiology Resource Center
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Mosquito Population Growth Poses Risk for Viral Encephalitis

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ISDH Sanitary Engineering

Mosquito eggs are hatching in Indiana, and the current wet and warm weather conditions are ideal for the mosquito population to grow rapidly in the next few days. State health officials warn this may mean a higher risk for West Nile encephalitis and other viral encephalitis infections, which are transmitted by mosquitoes.

"We do expect to see more transmission of the West Nile virus this year," said Michael Sinsko, senior medical entomologist at the Indiana State Department of Health.

The **West Nile virus** was first detected in Indiana in August 2001. By the end of last year, 47 birds and one horse in seven counties had tested positive for the virus. No human cases have been identified in Indiana. Most people who have been infected with the virus in the eastern US have no symptoms or mild symptoms, including fever, headache, body aches, and occasionally a skin rash and lymphadenopathy. More severe infection (encephalitis) is less common and may be marked by headache, high fever, stiff neck, stupor, disorientation, coma, convulsions, and muscle weakness. Death may occur in about 1% of those severely ill. Symptoms occur 3 to 15 days after the bite of an infected mosquito, and there is no specific therapy.

Table of Contents:

Article	Page No.
Mosquito Population Growth Poses Risk for Viral Encephalitis	1
2002 Indiana Fish Consumption Advisory	4
ISDH Emergency Phone Numbers .	5
Cardiovascular Disease in Indiana: Prevalence and Risk Factors	6
Indiana HIV/STD OASIS Project .	10
Immunology 101 & Interpreting Laboratory Results	13
Wonderful Wide Web Sites	14
HIV Disease Summary	15
Reported Cases of selected notifiable diseases	15

The risk of acquiring West Nile encephalitis is limited to persons in areas where virus activity occurs and is higher in persons 50 years of age and older. West Nile encephalitis is usually transmitted by *Culex* species mosquitoes but can also be transmitted by *Aedes*, *Anopheles*, and other species. West Nile encephalitis is not transmitted person-to-person.

Besides West Nile encephalitis, three other types of mosquito-borne encephalitis infection are endemic to Indiana. **Eastern equine encephalitis virus** (EEE) is maintained in nature by *Culiseta melanura* mosquitoes and birds in swampy habitats. Other mosquitoes, such as *Coquilletidia perturbans*, *Aedes sollicitans*, *Ae. vexans*, and *Culex nigripalpus* may acquire the virus from the swamp reservoir and transmit it to humans, horses and other hosts. Symptoms occur between 4 and 10 days after exposure, and include sudden onset of fever, muscle aches, and severe headache. Many individuals will progress to more severe symptoms including seizures and coma, with a mortality rate of approximately 33%. There is no specific treatment. Those who survive may suffer permanent brain damage or other neurological sequelae.

St. Louis Encephalitis (SLE) is the most common mosquito-borne human pathogen in the US. However, over 99% of SLE infections do not produce any overt symptoms, which can range from headache and fever to meningoencephalitis. The case-fatality rate is 5-15%, with the elderly at highest risk for severe disease and death. The infection is generally milder in children than adults, but children have a higher rate of developing encephalitis. There is no specific treatment. Periodic epidemics of SLE have occurred in the Midwest and Southeastern US, with the most recent outbreaks in Indiana occurring in the early 1980s and mid-1970s. *Culex pipiens pipiens* is the principal mosquito vector in the Midwest.

La Crosse Encephalitis (LAC) was first discovered in La Crosse, Wisconsin in 1963. Most cases occur in the upper Midwestern states, including Indiana, and most cases occur in children under 16 years of age. Transmitted by the daytime-biting treehole mosquito, *Aedes triseriatus*, the virus naturally cycles between hosts, such as chipmunks and tree squirrels, in forest habitats. Symptoms usually develop within 5-15 days after exposure, and include fever, headache, nausea, vomiting and lethargy. Severe disease occurs most commonly in those under 16 years old and is characterized by seizures, coma, and neurologic sequelae. Death results in fewer than 1% of cases. Adults seldom experience more than a headache. There is no specific treatment.

In nature, the cycle of transmission is maintained by mosquito vectors and the bird or mammal reservoir hosts, with horses, other bird species, and humans serving as dead-end hosts. The ISDH conducts avian surveillance testing each year by collecting wild birds in several areas of the state and taking a blood specimen. The blood is tested for the presence of antibody to EEE, SLE, and WNV to determine if the bird has been exposed to virus. If there is an increase in the number of positive birds, especially juveniles (which would have been infected during the present season), then preventive measures can be taken in that area.

Hoosiers can help prevent transmission of viral encephalitis by mosquitoes. In Indiana, mosquitoes that transmit viral encephalitis often breed in containers like tires, buckets, and unused wading pools, as well as tree holes. Homeowners should check their property and overturn or cover containers and drain or fill tree holes. Birdbaths should be flushed at least once a week. Another area where large numbers of disease-carrying mosquitoes breed is accumulations of sewage water, so homeowners should repair all malfunctioning septic systems that are discharging to the surface.

Sinsko suggests that homeowners stock ornamental ponds with fish, like bluegills or sunfish, so that the fish will feed on the mosquito larvae and pupae.

The most effective mosquito repellants contain diethyl toluamide (DEET) as the active ingredient. Different brands and formulations have various concentrations of this chemical. Health authorities recommend that parents avoid using formulations with concentrations greater than 15 percent on small children. Pediatric formulations of repellent for small children are widely available.

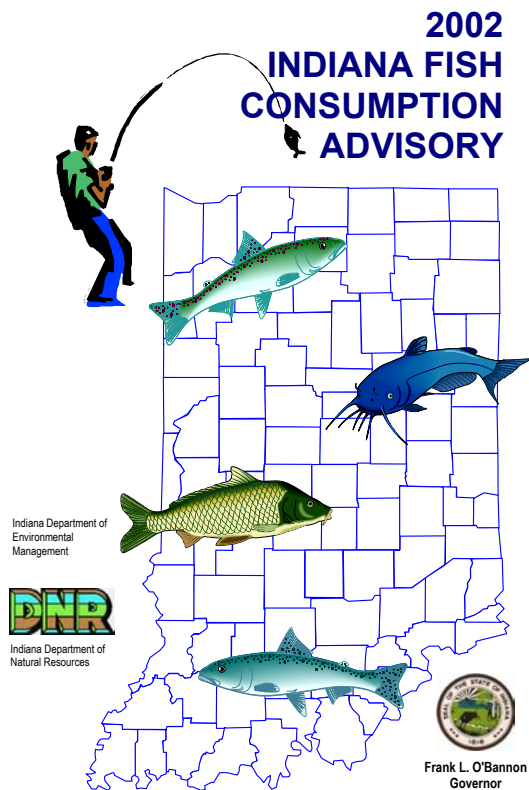
Sinsko recommends that whenever possible, the repellent be applied to clothing rather than skin. In all cases, everyone should read the precautions on the labels of all repellent products before use.

Sinsko said the State Department of Health is encouraging people to notify their local health departments if they notice a dead crow, blue jay or hawk, so it can be submitted for testing for the West Nile virus. These types of birds are particularly sensitive to being killed by the virus.

"The more information we can get, the more accurate picture we can get of where the West Nile virus is throughout the state," said Sinsko.

“How to Prevent Mosquito-Borne Encephalitis”

- Don't let water accumulate in containers such as tires, barrels, cans, buckets, clogged rain gutters and wading pools.
- Flush birdbaths and wading pools at least once a week.
- Repair all malfunctioning septic systems that are discharging to the surface.
- Stock ornamental ponds with fish, like bluegills or sunfish, so that the fish will feed on the mosquito larvae and pupae.
- Make sure homes are well screened.
- Alert local public health authorities to potential public breeding sites in your area.
- Avoid contact with mosquitoes, especially at dusk and dawn.
- Wear long-sleeved shirts and long pants when you are outdoors, especially in mosquito-prone areas.
- Spray clothing and exposed skin, if necessary, with repellent containing DEET. Health authorities recommend that parents avoid using formulations with concentrations greater than 15 percent on small children. Pediatric formulations of repellent for small children



LaNetta Alexander, MS
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Each year since 1972, three state agencies have collaborated to create the *Indiana Fish Consumption Advisory*. These state agencies include the Department of Natural Resources (DNR), the Indiana Department of Environmental Management (IDEM) and the Indiana State Department of Health (ISDH). The *Indiana Fish Consumption Advisory*, published annually by the ISDH, provides Hoosier anglers with health information about eating sport caught fish from Indiana waters. Each state agency plays a role in this endeavor. The DNR promotes the advisory in their annual fishing guide. Every licensed angler in the state receives a copy of the DNR fishing guide. IDEM collects fish from across the state to test for environmental contaminants. Using a risk based approach, ISDH interprets these data provided by IDEM and publishes the advisory.

The 2002 *Indiana Fish Consumption Advisory* is based on levels of polychlorinated biphenyls (PCBs) and mercury found in fish tissue. PCBs are synthetic oils once widely used in electrical transformers and

capacitors. Though banned for use by the federal government in the 1970's, PCBs are still found in the environment today because they break down very slowly. Based on cancer studies involving laboratory animals, the US Department of Health and Human Services has stated that PCBs may reasonably be anticipated to be carcinogens. Mercury is a naturally occurring metal that does not break down. Instead, it recycles between land, water and air. The primary source of mercury air deposition, however, is believed to be from coal fired power plants and from burning household and industrial wastes. Excessive exposure to mercury, particularly in its methylated form, can lead to developmental problems during fetal growth and childhood.

PCBs and mercury can accumulate in organic tissue. Once introduced to the aquatic environment, they move up the food chain and bioaccumulate in larger organisms like fish. Typically, PCBs bind to fatty tissue while mercury binds to muscle tissue. Data collected by IDEM often show that omnivorous bottom feeding fish like carp and catfish have more PCBs than leaner, predatory fish like largemouth bass. However, largemouth bass often have higher levels of mercury in their tissue than carp or catfish. In general, older and larger fish have more contaminants than younger, smaller fish.

The *Indiana Fish Consumption Advisory* recommendations for consumption of sport caught fish range from "unlimited consumption" to "no consumption for adult males and females". However, more restrictive consumption limits are placed for at risk, sensitive populations. Sensitive populations are identified as women who are of childbearing age and children under 15 years of age. A woman's exposure before pregnancy is a major concern; therefore, women should follow the advisory for several years before pregnancy. If PCBs or mercury have built up over time from prolonged exposure, it can take several years for the body to rid itself of the contaminant.

The goal of the *Indiana Fish Consumption Advisory* is not to discourage the consumption of fish, but to offer guidance when choosing to eat sport caught fish from Indiana waters. Fish is a good source of protein that is low in saturated fat. Research suggests consuming one half pound of fish per week is beneficial in preventing heart disease. Therefore, it is important to gain the benefits of eating fish while minimizing potential risk. Eating sport caught fish in moderation, by following the recommendations in the Indiana Fish Consumption Advisory, will allow you to gain the benefits of eating fish while avoiding potential long-term health risks.

You can reduce your risk by following some additional guidelines:

- 1.) Be selective about the locations where you catch fish. Choose areas where lower levels of contaminants are found in fish.
- 2.) Keep the small fish. Data show that younger, smaller fish have less contaminants than older, larger fish.
- 3.) Eat smaller fish meals. When you eat large fish, eat small servings. Freeze the rest and eat it over time.
- 4.) Clean and cook fish properly. A substantial amount of fat is found under the skin of the fish. Properly removing this fat can reduce the level of PCBs that may be present. Broiling, baking, or grilling fish so that fat drips away also reduces PCB levels.

The ISDH Environmental Epidemiology Section (EES) promotes the *Indiana Fish Consumption Advisory* through several different efforts. These efforts include direct mailings to citizens, local health departments, WIC clinics, state parks, state forests, fishery biologists, lake management districts, and solid and hazardous waste districts. In recent years, the EES has displayed Fish Consumption Advisory information at the Indiana State Fair and Minority Health Fair. Additional outreach materials were created by the EES to disseminate information about the advisory. These materials include the Expectant Mother's Guide brochures, Fish Advisory posters, and Fish Advisory magnets.

Information on the *Indiana Fish Consumption Advisory* is available by calling the ISDH Environmental Epidemiology Section at (317) 233-7055. In addition to the annually published booklet, the 2001 Fish Consumption Advisory is available on the ISDH web site at www.IN.gov/isdh/ (Click on Data and Statistics). The 2002 Fish Consumption Advisory should be available on the website soon.

ISDH Emergency Phone Numbers

Please use the following phone numbers to contact the ISDH in the event of a potential public health emergency, such as an infectious disease outbreak or possible exposure to a bioterrorism agent. During routine business hours (8:15-4:45 EST), please call the ISDH Communicable Disease Division at (317) 233-7125. For assistance during non-business hours, please contact the ISDH toll-free at (866) 233-1237 and ask to speak to the Infectious Disease Epidemiologist on call. This number is intended for public health professionals and health care providers, and is not intended for general distribution.

Cardiovascular Disease in Indiana: Prevalence and Risk Factors

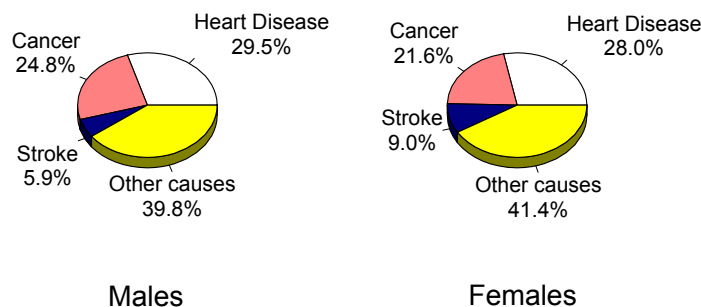
Elizabeth L. Hamilton-Byrd, MD
ISDH Epidemiology Resource Center

Cardiovascular disease (CVD), primarily heart diseases and stroke, is the number one cause of death for Indiana residents (Figure 1). In 2000, 21,659 Indiana residents died of major CVD, an age-adjusted death rate of 364.05/100,000. (All mortality rates are age-adjusted to the US 2000 standard million.) When listing the leading causes of death, the major subgroups of CVD are usually assessed separately; in contrast, the many different types of cancer (malignant neoplasms, the second leading cause of death) are lumped together. (There were 12,782 deaths of Indiana residents from all types of cancer combined in 2000.)

When considered separately, heart disease is the leading cause of death for both women and men, and stroke is the third leading cause of death. Women often believe they are most likely to die of breast cancer, yet more than twice as many women die of heart attacks than die of breast cancer. In Indiana in 2000, 944 women died of breast cancer. This is indeed a major tragedy, and it is hoped prevention, early detection, and improved therapy can reduce these numbers. However, in 2000 there were 2,246 Indiana women who died of heart attacks and 2,642 who died of stroke. It is clear that cardiovascular diseases are not just a threat to men, but that women also need to be aware of the signs of heart attack and stroke and take measures to decrease their risk factors for these diseases.

Figure 1.

Leading Causes of Death for Men and Women in Indiana, 2000

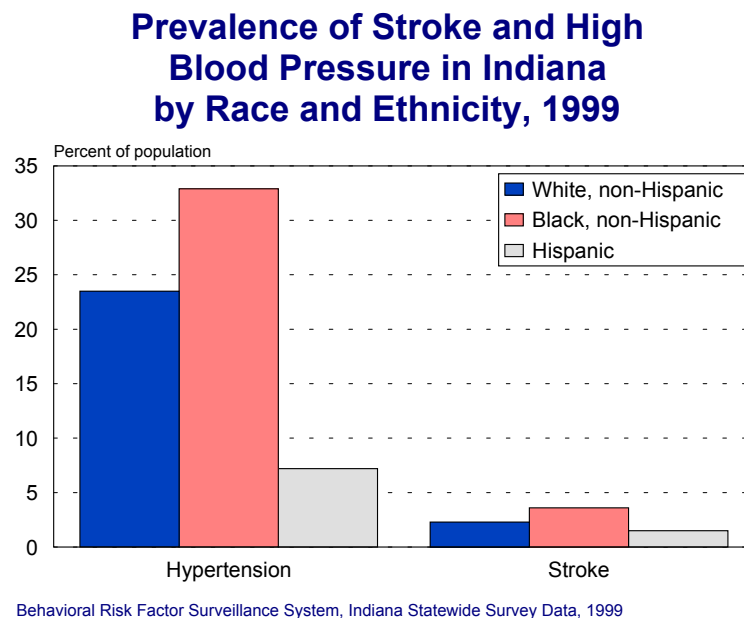


In order to better understand the prevalence of these chronic diseases and of the known risk factors for these diseases within the state, Indiana participates in the Behavioral Risk Factor Surveillance System (BRFSS). This ongoing telephone survey of the adult (over age 18) population living in households is conducted in collaboration with the Centers for Disease Control and Prevention (CDC). In both 1999 and 2000, Indiana asked Cardiovascular Disease module questions in addition to the BRFSS core questions. In 1999, the sample size was 2,443 randomly selected Indiana residents, and in 2000, the sample size increased to 2,923.

In 1999, but not in 2000, the core questions included questions about high blood pressure and high serum cholesterol levels. The vast majority of Indiana adults have had their blood pressure checked by a health professional at some time, and most (85.7%) have had their blood pressure checked in the past year. Surprisingly, however, 2% of adults aged 55 – 64 have never had their blood pressure checked. Also of note, 1.6% of Hispanics and 2.3% of those with less than a high school education have never had a blood pressure check. Slightly more than one of every four Indiana adults (25.6%) have been told by a health professional on at least one occasion (72.9% of these more than once) that they had high blood pressure. Recent studies have shown that cardiovascular risk increases as blood pressure increases, even for those whose blood pressure (BP) may have previously been considered normal. Current diagnostic guidelines define optimal blood pressure as systolic BP <120 and diastolic BP <80, normal blood pressure as systolic BP 120-129 or diastolic BP 80-84, high normal blood pressure as systolic BP 130-139 or diastolic BP 85-89, and hypertension beginning at systolic BP \geq 140 or diastolic BP \geq 90. High blood pressure is the most important modifiable risk factor for stroke.

Hypertension disproportionately affects African-Americans, with a self-reported prevalence of 32.9% as compared to 25.5% for white, non-Hispanics in Indiana. The age distribution of the Hispanic population of Indiana accounts to a great extent for the lower prevalence of chronic diseases such as hypertension (7.2%), for which increasing age is a risk factor. Over 57% of Indiana's Hispanic population is less than 30 years old and more than 80% is under 45 years. In addition, the lower rate of a number of diseases among Indiana's Hispanic population, many of whom are recent immigrants, may be ascribed to the "Healthy Immigrant Phenomenon", where the healthier residents of a country are those who are able to immigrate to a new home.

Figure 2.



The 1999 Indiana BRFSS also revealed that almost one-quarter of Indiana adults have not had their blood cholesterol level checked. Most of those who have not had a cholesterol level checked are under 45 years of age, but 9.5% of those 45 – 54, 12.1% of adults 55 – 64, and 8.5 % of people over 65 years have also never had this important screening test. Of Indiana residents who have had their serum cholesterol level checked, 31.5% have been told that their cholesterol level was high. The highest prevalence of reported hypercholesterolemia (47.8%) was among those over 65 years of age. Indiana adults with the lowest income level (<\$15,000) were also more likely to have high cholesterol levels (39.1%). Total cholesterol <200 mg/dL is desirable, 200-239 is borderline high, and ≥240 is high. High-density lipoprotein (HDL) cholesterol (“good” cholesterol) is low if <40. A high level (>60) for HDL cholesterol is considered protective against cardiovascular diseases. The risk of coronary heart disease is approximately 2.4 times greater for persons with elevated serum cholesterol. The risk of heart attack for both men and women is highest for those with low HDL levels and high total cholesterol levels. Those with low HDL levels, however, have an increased risk of heart attack regardless of their total cholesterol level.

In 2000, 5.1% of Indiana adults reported having been diagnosed with a heart attack and 2.5% of Indiana’s adult population reported having been told by a doctor that they had a stroke. These percentages do not represent a significant difference from the 1999 figures of 6.2% and 2.4%, as the 95% confidence intervals for the 2 years completely overlap. Men were somewhat more likely than women to have been diagnosed with a heart attack (6.4% vs. 4.0%), but the prevalence of stroke was essentially the same for the sexes (2.4% for males vs. 2.6% for females). As expected the prevalence of heart attack and stroke was highest for those over age 65 (14.9% and 8.0% respectively), but there was a 1.0% prevalence of both heart attack and stroke even among young adults 25 – 34 years of age. The reported prevalence of stroke was slightly higher for blacks than for whites (3.1% vs. 2.5%); however, there was no appreciable difference between the races for heart attack (4.9% for blacks vs. 5.1% for whites). The Indiana Hispanic population, as with hypertension, has a lower prevalence of heart attack (1.5%) and stroke (2.1%).

Primary prevention of these cardiovascular diseases involves risk factor reduction. Two lifestyle factors that increase the risk for heart attack and stroke are physical inactivity and a diet high in saturated fats and cholesterol. In 2000, 35% of Indiana adults reported having been advised by a doctor to exercise more in order to lower their risk of heart disease or stroke, and 31.6% reported receiving a physician’s advice to eat fewer high fat or high cholesterol foods. Much higher percentages of Indiana residents report that they are making these heart healthy changes (49.7% exercising more, 61.2% decreasing fat and cholesterol in their diets). Still, 25.3% of Indiana adults report no leisure time physical activity and an additional 30.1% are active only irregularly. People who are inactive have almost twice the risk of coronary heart disease of active adults. The amount of fats and cholesterol in the diets of Indiana residents is not assessed in the BRFSS questionnaire. The survey does indicate that only 20% of Indiana adults are following the dietary recommendation to eat 5 or more servings of fruits and vegetables every day. Also, more than half (56.7%) of Indiana adults are either overweight or obese based on a Body Mass Index (weight in kg /height in m²) of 25 or greater.

Risk Factors for Heart Disease and Stroke that You Can Change or Control

- 6 Tobacco smoke
- 6 High blood pressure
- 6 High blood cholesterol
- 6 Physical inactivity
- 6 Obesity
- 6 Diabetes

A third major lifestyle factor in increasing the risk of cardiovascular disease is tobacco smoking. The prevalence of smoking among Indiana adults, 26.9%, is the 4th highest rate in the United States. The rate is highest (37.3%) in young adults 18 – 24 years of age. Cigarette smoking has been estimated to increase the risk of coronary heart disease by 2.5 times.

People who have had a heart attack or stroke are at much greater risk of having another major cardiovascular event than are the rest of the population. It has been shown that the risk of a secondary event can be lowered by the use of antithrombotic (blood clot preventing) medications, such as aspirin. Aspirin has also been shown to have value in the primary prevention of heart attack. In 2000, 29% of Indiana adults age 35 and over reported that they took aspirin on a daily or every other day basis. The vast majority of those with regular aspirin use were taking it to reduce their chances of a heart attack and/or stroke (82.8% and 70.6% respectively).

Women have lower age-specific mortality rates from heart disease at every age, yet more women than men die each year in Indiana from heart disease because of the longer life span of women. The risk of heart disease in women increases markedly after menopause. This has led many in the medical community to believe that estrogen is protective against heart disease for women. However, the results of recent randomized controlled trials, in which thousands of women were enrolled, have found no such benefits. Estrogen may be prescribed for a variety of other reasons including relief from menopausal symptoms, such as hot flashes, and prevention of postmenopausal osteoporosis (bone thinning or bone loss).

The 2000 Indiana BRFSS cardiovascular module included questions regarding the use of estrogen replacement therapy by postmenopausal Indiana women. More than half of postmenopausal women in Indiana (62.7%) report that their doctor has discussed the benefits and risks of estrogen with them. Approximately half (48.9%) say that their doctor has at some time prescribed estrogen pills, other than birth control pills, for them. Of these 62.2% say that they are currently taking estrogen pills. Of those currently taking estrogen, 22.6% stated that one reason they were taking estrogen was to prevent a heart attack. Most women were taking estrogen to treat or prevent osteoporosis (73.4%) and/or to treat symptoms of menopause (73.7%). Of those women who had previously taken estrogen pills, the majority (66.1%) had taken it for treatment of menopausal symptoms. A substantial percentage (47.9%) reported having used estrogen for treatment or prevention of bone loss. Only a small proportion of Indiana women (6.9%) had previously used estrogen to prevent a heart attack. A much greater percentage of white women (64.6%) than black women (37.4%) reported having discussed estrogen with their physician. Similarly, 50.6% of white women had at some time been prescribed estrogen pills as compared to only 29.6% of black women.

The burden of cardiovascular disease is great in Indiana. Through the use of the cardiovascular module of the BRFSS, ISDH can monitor trends in the prevalence, risk factors, and health disparities associated with this important group of diseases.

MAY is STROKE AWARENESS MONTH

Take action to lower your risk.

Stroke is an EMERGENCY: CALL 911.

Indiana HIV/STD OASIS Project

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ISDH STD Program Manager

Jerry Burkman, M.P.H., R.N.
ISDH HIV Surveillance Program Manager

In November 1999, the Indiana State Department of Health (ISDH) STD program and the HIV/AIDS surveillance program received of a Centers for Disease Control and Prevention (CDC) grant entitled ***Outcomes Assessment Through Systems of Integrated Surveillance (OASIS)***. The purpose of the grant was to support disease prevention and program planning through the integration of management and analysis of STD and HIV/AIDS surveillance data through a blinded match. The activities were proposed to assist ISDH with the implementation of HIV/AIDS and STD risk profiles in public health and other community based prevention/intervention programs.

The concept of combining STD and HIV case data was discussed with the HIV Prevention Community Planning Group (CPG) and the Stamp Out Syphilis Coalition (SOS) of Marion County. The CPG is an advisory group to the ISDH HIV Prevention Grant. The SOS is a group of 35 community representatives that works closely with ISDH and the Marion County Health Department to eliminate syphilis as a health threat to Marion County citizens. These two citizens groups were assured that the activity would take place in a double-blinded data match so that neither HIV nor STD program personnel were exposed to their program partner's identity through a double-blinded data match. Both groups provided letters of support for this project.

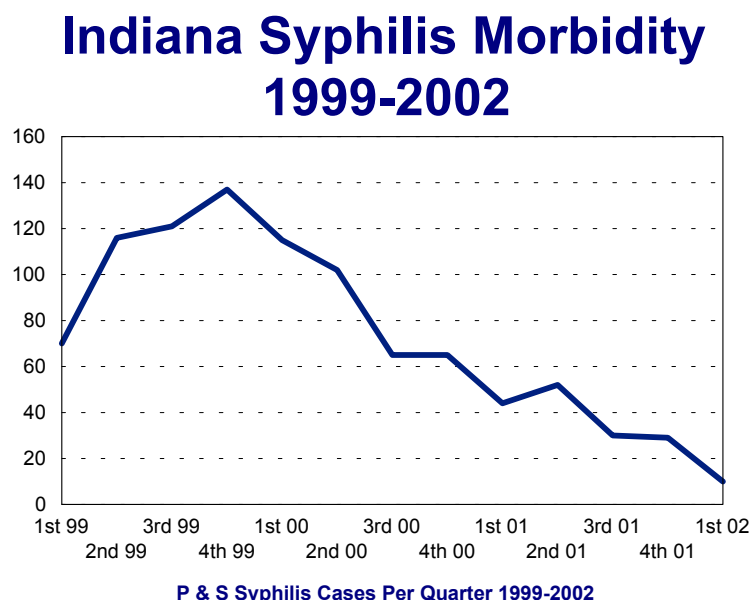
Behavioral risk data have been collected for HIV/AIDS cases since 1982. There are over of 11,000 HIV/AIDS case reports with accompanying behavioral risk data entered into the HIV/AIDS Reporting System (HARS) database software. Syphilis case behavioral information is collected in the STD MIS database. Over 64,000 STD cases are contained in the 1999 through 2001 database, although risk factors are only recorded for syphilis infections.

Data from before and after the current syphilis outbreak in Marion County were analyzed to identify risk behaviors as well as co-infection rates. Behavioral risk data were to be used to design behavioral interventions and determine common risk behaviors in areas where co-infection is more common. The HIV surveillance records from 1982 through 2001 were compared to STD morbidity reports from the past three years. There were 253 matches identified as follows: 74 chlamydia cases, 132 gonorrhea cases, and 47 syphilis (all stages) cases.

The HARS database was examined from 1982 through the present. The STD MIS data examined cases from 1999 (when behavior risks were added to the data base) through 2001. Therefore, the data indicate that most co-infections involve patients who become infected with an STD after HIV diagnosis (80%). The following diseases account for those coinfections: 24% of chlamydia infections acquired before HIV, 25% of gonorrhea infections acquired before HIV, and 10% of syphilis infections acquired before HIV. Marion County accounted for 74% (35 of 47) syphilis/HIV matches. This was an expected finding due to the ongoing syphilis outbreak in Marion County during this period. The Marion County STD Program has been using a risk assessment form tailored to the analysis needs for the outbreak. This risk assessment form was adopted for statewide use in 2000.

Statewide, the number of matches for early syphilis cases was constant even though syphilis morbidity cases decreased from 621 in 1999 to 526 in 2000 to 272 in 2001. The number of cases of HIV co-infection was 15 in 1999 and 16 in 2000 and 2001. Figure 1 shows the data for Primary and Secondary (Infectious) syphilis for the years 1999 through 2000.

Figure 1.



One hundred and sixty one (64%) of all matches occurred with patients residing in Marion County. Of the 47 syphilis co-infections reported in Indiana, 35 (74%) were reported as residents of Marion County. Because a majority of HIV/AIDS patients already lived in or moved into Indianapolis shortly after their diagnosis, subsequent STDs would occur in greater numbers there.

There were 12 persons subsequently diagnosed as HIV infected who had previously acquired syphilis. Six of the seven females were white females in the same zip codes but not in the “hot zone.”* These cases represent one half of all HIV cases diagnosed after a syphilis infection and 13% (6 of 46) of all white females diagnosed with early syphilis during the three-year period. There were 4 black males, 1 white male, and 6 white females and 1 black female in this group. Ten concurrent diagnoses were related to non-injection drug use.

The risk factors for the largest grouping of subsequently infected HIV persons (six white females) were as listed.

- >1 sex partner in last 90 days
- In the Marion County Jail lock-up while infectious
- Used condoms with pickups only
- Sex with a ‘crack’ user•
- Sex with a male
- “Hot zone” linked*

**The “hot zone” is an area of four zip codes (46205, 46208, 46218, and 46226) that were the addresses of 65% of all syphilis cases during 1999 – 2001.*

The above factors demonstrate the value of syphilis screening in city/county lock ups. The positive members of this subgroup would all have been detected while in lock up if screening was available and accepted.

There were 6 Men Who Had Sex with Men (MSM) in HARS who had no risk identified in the STD/MIS. One MSM in STD/MIS had no risk identified in HARS. This indicates that in STD clinic settings risk reduction messages and partner elicitation and subsequent notification of an exposure have not been initiated during encounters with gay or bisexual men in Marion County.

Data from 1993 through 1998 can be compared, although cases documentation other than morbidity reporting did not occur during that time. The comparison will offer a more balanced picture of HIV/STD co-infection prior to 1999.

The ISDH STD and HIV Surveillance Programs will continue this double-blinded analysis in future years to obtain the best data for HIV co-infection rates.

Immunology 101 & Interpreting Laboratory Results



***Presented by the Indiana State Department of Health
Epidemiology Resource Center (ERC)***

This course is targeted to laboratory personnel and nurses dealing with immunology. By the conclusion of the course, participants will have a fundamental knowledge of immunity and how the immune system processes can serve as markers to diagnose disease. Additionally, the training will cover the differences between different types of laboratory testing procedures and how to interpret results produced by these procedures. The importance of laboratory result information in disease investigation and case classification will also be discussed.

Pam Pontones, ISDH Epidemiologist, will conduct the training **on Friday, June 7, 2002 via satellite downlink from 1:00-3:00**. All presentation materials will be available on the ISDH web site at <http://www.statehealth.IN.gov/bioterrorism> two weeks prior to the session. Registrants will be notified via e-mail of their nearest downlink site prior to the broadcast.

Registration

Those interested must register no later than Friday May 17, 2002. To register, e-mail your form to Pam Pontones at ppontones@isdh.state.in.us or fax your form to 317-233-7805. Alternatively, you may mail your form to ISDH, attn: Pam Pontones, 2 North Meridian Street 6-A, Indianapolis, IN 46204. Copies of the form can be made as necessary. Registrants will receive an e-mail confirmation. **There is no registration fee for the course.**

Name: _____

Agency: _____

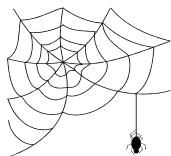
Address: _____

City _____ State _____ Zip Code _____

Phone Number: (____) _____ -- _____ Fax Number: (____) _____ -- _____

E-mail Address: _____

Thank you for your interest in Immunology 101 & Interpreting Laboratory Results!



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

<http://www.statehealth.IN.gov> (under Data and Statistics)

Indiana Cancer Incidence Report (1990, 95,96)	Indiana Mortality Report (97, 98, 99, 2000)
Indiana Cancer Mortality Report (1990-94, 1992-96)	Indiana Natality/Induced Termination of Pregnancy/Marriage Report (1998, 1999)
Indiana Health Behavior Risk Factors (1995-96, 97, 98, 99, 2000)	Indiana Natality Report (1995, 96, 97)
	Indiana Marriage Report (1995, 96, 97)
Indiana Hospital Consumer Guide (1996)	Indiana Report of Diseases of Public Health Interest (1997, 98, 99)
Indiana Maternal & Child Health Outcomes & Performance Measures (1988-97, 1989-98, 1990-99)	

HIV Disease Summary

Information as of April 30, 2002 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

342	New HIV cases from April 2001 thru March 2002	12-month incidence	5.63 cases/100,000
3,541	Total HIV-positive, alive and without AIDS on March 31, 2002	Point prevalence	58.24 cases/100,000

AIDS cases to date:

372	New AIDS cases April 2001 thru March 2002	12-month incidence	6.12 cases/100,000
2,997	Total AIDS cases, alive on March 31, 2002	Point prevalence	49.29 cases/100,000
6,565	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in April MMWR Weeks 14-17		Cumulative Cases Reported January - April MMWR Weeks 1-17	
	2001	2002	2001	2002
Campylobacteriosis	15	36	67	75
<i>Chlamydia</i>	1,099	1,064	5,277	5,331
<i>E. coli</i> O157:H7	4	1	12	8
Hepatitis A	8	3	30	17
Hepatitis B	2	3	6	9
Invasive Drug Resistant <i>S. pneumoniae</i> (DRSP)	28	19	86	72
Gonorrhea	421	444	2,194	2,371
Legionellosis	1	0	3	3
Lyme Disease	0	0	0	2
Measles	0	0	2	0
Meningococcal, invasive	5	4	6	15
Pertussis	6	1	11	15
Rocky Mountain Spotted Fever	0	0	0	0
Salmonellosis	31	45	89	95
Shigellosis	19	9	84	22
Syphilis (Primary and Secondary)	14	8	57	20
Tuberculosis	9	8	21	22
Animal Rabies	0	2	1 (Bat)	3 (Bats)

**For information on reporting of communicable diseases in Indiana,
call the *ISDH Communicable Disease Division* at (317) 233-7665.**

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